


In The Claims:

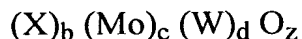
1. (Currently Amended) A hydroprocessing process, comprising:

contacting a feedstock, at hydrotreating conditions, with a bulk multimetallic catalyst comprised of at least one Group VIII non-noble metal and at least two Group VIB metals and wherein the ratio of Group VIB metal to Group VIII non-noble metal is from about 10:1 to about 1:10 to form a hydrotreated product.

2. (Currently Amended) The process of claim 1 wherein ~~the~~ said at least one Group VIII non-noble metal is selected from the group consisting of Ni and Co and the Group VIB metals are selected from the group consisting of Mo and W.

 3. (Currently Amended) The process of claim 1 wherein said at least two Group VIB metals are ~~present as~~ Mo and W and the ratio of Mo to W is from about 9:1 to about 1:9.

4. (Currently Amended) The process of claim 1 wherein ~~the~~ said bulk multimetallic catalyst is represented by the formula:



wherein X is a Group VIII non-noble metal, and the molar ratio of b: (c+d) is 0.5/1 to 3/1.

5. (Currently Amended) The process of claim ~~3~~ 4 wherein ~~the~~ said molar ratio of b:(c+d) is 0.75/1 to 1.5/1.

6. (Currently Amended) The process of claim ~~3~~ 4 wherein ~~the~~ said molar ratio of c:d is >0.01/1.

7. (Currently Amended) The process of claim 1 further comprising ~~the step of~~ sulfiding a multimetallic oxide precursor ~~in order to form the~~ said bulk multimetallic ~~catalysts~~ catalyst, wherein the precursor ~~is~~ comprises essentially an amorphous material having a unique X-ray diffraction pattern showing crystalline peaks at $d = 2.53$ Angstroms and $d = 1.70$ Angstroms.

8. (Currently Amended) The process of claim 1 wherein ~~the~~ said feedstock comprises at least one of naphtha, diesel, heavy gas oil, lube oil, and residuum virgin distillates.


18
9. (Currently Amended) The process of claim 8 1 wherein ~~the~~ said feedstock ~~is~~ comprises naphtha boiling in the range of 25°C to 210°C , and ~~the hydroprocessing~~ said hydrotreating conditions include a reaction temperature of 100°C to 370°C , a pressure of 10 Bar to 60 Bar, a space velocity of 0.5 to 10 V/V/Hr, and a hydrogen gas treat rate of 100 to 2,000 SCF/B.

10. (Currently Amended) The process of claim 8 1 wherein ~~the~~ said feedstock ~~is~~ comprises diesel boiling in the range of 170°C to 350°C , and ~~the hydroprocessing~~ said hydrotreating conditions include a reaction temperature of 200°C to 400°C , a pressure of 15 Bar to 110 Bar, a space velocity of 0.5 V/V/Hr to 4 V/V/Hr, and a hydrogen gas treat rate of 500 SCF/B to 6,000 SCF/B.

11. (Currently Amended) The process of claim 8 1 wherein ~~the~~ said feedstock ~~is~~ comprises heavy gas oil boiling in the range of 325°C to 475°C , and wherein ~~the hydroprocessing~~ said hydrotreating conditions include a reaction temperature of 260°C to 430°C , a pressure of 15 Bar to 170 Bar, a space velocity of

0.3 V/V/Hr to 2 V/V/Hr, and a hydrogen gas treat rate of 1,000 SCF/B to 6,000 SCF/B.

12. (Currently Amended) The process of claim 8 1 wherein ~~the~~ said feedstock ~~is~~ comprises a lubricating oil boiling in the range of 290°C to 550°C, and wherein ~~the hydroprocessing~~ said hydrotreating conditions include a reaction temperature of 200°C to 450°C, a pressure of 6 Bar and 210 Bar, a space velocity of 0.2 V/V/Hr to 5 V/V/Hr, and a hydrogen gas treat rate of 100 SCF/B to 10,000 SCF/B.

 13. (Currently Amended) The process of claim 8 1 wherein ~~the~~ said feedstock ~~is~~ comprises a residuum having a 10% to 50% boiling range of 575°C, and wherein ~~the hydroprocessing~~ said hydrotreating conditions include a reaction temperature of 340°C to 450°C, a pressure of 65 Bar to 1100 Bar, a space velocity of 0.1 V/V/Hr to 1 V/V/Hr, and a hydrogen gas treat rate of 2,000 to 10,000 SCF/B.

14. (Currently Amended) The process of claim 1 wherein the bulk multi-metallic catalyst ~~is in the form of~~ comprises particles having a median diameter of at least 50 nm, a surface area of at least 10 m²/gm, a pore volume ranging from 0.05 to 5 ml/g, and an absence of pores smaller than 1 nm.

15. (Currently Amended) The process of claim 14 wherein ~~the~~ said bulk multimetallic catalyst particle ~~has~~ comprises a core-shell structure.

16. (Cancelled)

17. (Currently Amended) The process of claim ~~46~~ 1 further comprising contacting at least one of ~~the~~ said feedstock and hydroprocessed product with a

catalytically effective amount of a second catalyst under catalytic conversion conditions.

18. (Currently Amended) The process of claim 17 wherein ~~the~~ said second catalyst is comprises at least one of a hydroprocessing catalyst, a cracking catalyst, and an isomerization catalyst.

19. (Currently Amended) The process of claim 18 wherein ~~the~~ said second catalyst is present in at least one of

(i) a first reaction zone or zones upstream of ~~the~~ said bulk multimetallic catalyst;

(ii) a second reaction zone or zones containing ~~the~~ said bulk multimetallic catalyst; and

(iii) a third reaction zone or zones downstream of ~~the~~ said bulk multimetallic catalyst.

20. (Currently Amended) The process of claim 1 wherein ~~the~~ said bulk multimetallic catalyst is a sulfided catalyst.

21. (New) The process of claim 1 wherein said bulk multimetallic catalyst is sulfided in-situ.
